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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/407,544	09/28/1999	RICHARD C WIAKALA	PO9-99-158	2890

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EXAMINER

PARK, ILWOO

ART UNIT	PAPER NUMBER
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2182

16

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/407,544

Applicant(s)

CWIAKALA ET AL.

Examiner

Ilwoo Park

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 43, 45, and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Maeurer et al., US patent No. 5,301,323.

As to claim 43, Maeurer et al teach a method of managing input/output (I/O) configurations of a computing environment, said method comprising:

selecting a channel path from a plurality of channel paths to be used in adjusting an I/O configuration of said computing environment, said selecting being based on a plurality of characteristics [col. 3, lines 49-50; col. 3, lines 55-56; col. 7, lines 34-39; col. 7, lines 65-67; col. 9, lines 28-35, col. 10, lines 8-15]; and

dynamically adjusting said I/O configuration using the selected channel path [col. 3, lines 47-65; col. 10, lines 41-43].

As to claim 45, Maeurer et al teach said selecting is further based on at least one of an impact on response time to achieve specific workload goals, contention on a subsystem of said I/O configuration, ~~availability~~ [col. 4, line 68–col. 4, line 2; col. 9, lines 28-35] characteristics of said channel path, and complexity of the resulting I/O configuration.

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As to claim 47, Maeurer et al teach moving the selected channel path from one port to another port [col. 9, lines 36-41; col. 9, lines 50-53; table 1 in col. 10-col. 11].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-42, 44, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeurer et al., US patent No. 5,301,323 in view of D'Errico, US patent No. 6,434,637.

As to claims 1, 14, 27, 28, and 44, Maeurer et al teach a method of managing input/output (I/O) of a computing environment, said method comprising:

selecting a channel path from a plurality of channel paths to be used in adjusting an I/O configuration of said computing environment, said selecting being based on a plurality of characteristics [col. 3, lines 49-50; col. 3, lines 55-56; col. 7, lines 34-39; col. 7, lines 65-67; col. 9, lines 28-35, col. 10, lines 8-15]; and

dynamically adjusting said I/O configuration using the selected channel path [col. 3, lines 47-65; col. 10, line 41-col. 11, line 52].

Though Maeurer et al teach the selection of a channel path from a plurality of channel paths, which are resided between a processor and a plurality of I/O controllers [fig. 1] for servicing I/O workloads, is based on a utilization of a channel path [col. 8,

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lines 20-22], Maeurer et al do not explicitly disclose the plurality of characteristics include at least in part of an I/O velocity resulting from selecting the channel path.

D'Errico teaches [col. 14, lines 42-65] a selection of a channel path from a plurality of channel paths, which are resided between a processor and a plurality of I/O controllers [fig. 1] for servicing I/O workloads, is based on a channel path utilization [col. 14, lines 42-65] including at least in part of an I/O velocity [col. 14, lines 63-65] resulting from selecting the channel path.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Maeurer et al and D'Errico because they both teach a selection of a channel path from a plurality of channel paths based on a path utilization and the D'Errico's teaching of the path utilization further including at least in part of an I/O velocity resulting from selecting the channel path would increase accuracy [D'Errico: col. 4, lines 47-52] in reflecting a unit measure of bandwidth utilization of Maeurer et al.

As to claims 2, 15, and 29, Maeurer et al teach attaching the selected channel path to a subsystem of said I/O configuration [see table 1 in col. 10-col. 11].

As to claims 3, 16, and 30, Maeurer et al teach said selected channel path and said subsystem are associated with a workload executing within at least one logical partition of said computing environment [col. 1, lines 24-31], and the dynamically adjusting provides additional resources [col. 2, lines 59-62; table 1 in col. 10-col. 11] to said workload.

As to claims 4, 17, and 31, Maeurer et al teach said selected channel path was removed from another workload executing within at least one logical partition, thereby reducing resources of said another workload [table 1 in col. 10-col. 11].

As to claims 5, 18, and 32, Maeurer et al teach removing attachment of the selected channel path from a subsystem of said I/O configuration [table 1 in col. 10-col. 11].

As to claims 6, 19, and 33, Maeurer et al teach said selecting is further based on at least one of an impact on response time to achieve specific workload goals, contention on a subsystem of said I/O configuration, availability [col. 4, line 68-col. 4, line 2; col. 9, lines 28-35] characteristics of said channel path, and complexity of the resulting I/O configuration.

As to claims 7, 20, and 34, Maeurer et al teach determining that said I/O configuration is to be adjusted [col. 7, lines 3-4; table 1 in col. 10-col. 11].

As to claims 8, 21, and 35, Maeurer et al teach determining comprises using one or more workload goals in making the determination [col. 7, lines 65-67].

As to claims 9, 22, and 36, Maeurer et al teach the one or more workload goals are associated with workloads of a group of partitions of said computing environment [col. 1, lines 24-31; col. 2, lines 50-52].

As to claims 10, 23, and 37, Maeurer et al teach determining comprises consulting with one or mere workload managers of said computing environment in making the determination [col. 4, lines 37-41].

As to claims 11, 24, and 38, Maeurer et al teach determining comprises using measured subsystem performance being within an average target range [col. 10, lines 54-58].

As to claims 12, 25, and 39, Maeurer et al teach projecting an impact of the adjustment on one or more subsystems to be effected by the adjustment, prior to said dynamically adjusting [col. 9, lines 22-26; col. 9, lines 41-45; col. 9, line 60-col. 10, line 2].

As to claims 13, 26, and 40, Maeurer et al teach dynamically adjusting when the impact is acceptable [col. 9, lines 41-45; col. 9, line 60-col. 10, line 2].

As to claim 41, Maeurer et al teach said plurality of channel paths include one or more channel paths that can be added and one or more channel paths that can be deleted [col. 10, lines 41-43], D'Errico teaches the selecting comprises choosing the channel path from the plurality of channel paths which satisfies a best option, the best option taking into consideration the I/O velocity resulting from selecting the channel path [col. 14, lines 63-65], and Maeurer et al teach the selecting concurrently [col. 9, lines 36-41; col. 9, lines 50-53; table 1 in col. 10-col. 11] takes into consideration the one or more channel paths that can be added and the one or more channel paths that can be deleted.

As to claim 46, Maeurer et al teach said plurality of channel paths include one or more channel paths that can be added and one or more channel paths that can be deleted [col. 10, lines 41-43], D'Errico teaches the selecting comprises choosing the channel path from the plurality of channel paths which satisfies a best option [col. 14,

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lines 63-65], and Maeurer et al teach the selecting concurrently [col. 9, lines 36-41; col. 9, lines 50-53; table 1 in col. 10-col. 11] takes into consideration the one or more channel paths that can be added and the one or more channel paths that can be deleted.

Response to Arguments

5. In view of the Appeal Brief filed on 4/3/2003, PROSECUTION IS HEREBY REOPENED. New Grounds of Rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

6. The Examiner summarizes the various points raised by the Applicants and addresses replies individually.

The Applicants argue in substance that a) the use of I/O velocity of D'Errico is for selecting a path not for adjusting or changing an I/O configuration and b) Maeurer et al teach only one characteristic not a plurality of characteristics.

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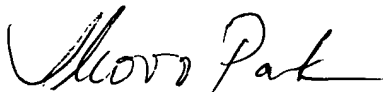
For the point a), Maeurer et al and D'Errico both teach selecting a path based on a path utilization and Maeurer et al teach a path selection is for adjusting an I/O configuration.

And for the point b), Maeurer et al teach a plurality of characteristics [such as varying system workload, some set of priorities, e.g., workload goals or system performance, CHPID utilizations in col. 3, lines 49-50; col. 3, lines 55-56; col. 7, lines 34-39; col. 7, lines 65-67; col. 9, lines 28-35, col. 10, lines 8-15].

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (703) 308-7811. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on (703) 308-3301. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Hand-delivered responses should be brought to US Patent and Trademark Office, 2011 South Clark Place, Customer Window, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202.



Ilwoo Park

Primary Examiner

May 25, 2004